AMENDED CLAIM SET

1. (Currently Amended) A stent comprising:

a metallic stent body; ~~constructed of a material including a stent metallic substance and~~

a molecular carbon deposit present ~~at a molecular level within~~ at a depth of not more than about 2000 Å beneath the stent body surface; ~~metallic substance and at a depth within a surface of the stent~~; and

a plasma-polymerized polymer film layer deposited over the stent body surface.

2. (Currently amended) The stent of claim 1, ~~additionally including a~~ wherein the plasma polymerized film layer ~~formed on the surface of the stent, wherein the plasma polymerized film layer~~ is chemically bonded to the carbon deposit.

3. (Cancel)

4. (Currently amended) The stent of Claim [[3]] 1, wherein the plasma-polymerized polymer film layer comprises an acrylate.

5. (Currently amended) The stent of Claim [[3]] 1, wherein the plasma-polymerized polymer film layer ~~polymer~~ is formed by exposing the stent to an acrylic acid plasma.

6. (Currently amended) The stent of Claim 1, ~~additionally including a~~ wherein the plasma polymerized film layer ~~deposited on the surface of the stent, wherein the film layer includes~~ comprises ~~functionalities~~ functional groups selected from a group consisting of carboxylate, amine and sulfate

~~functional groups~~.

7. (Cancel)

8. (Original) The stent of Claim 1, wherein the surface of the stent is the tissue-contacting surface of the stent.

9. (Currently amended) The stent of Claim 1, wherein the ~~stent~~ metallic stent body ~~substance~~ comprises stainless steel.

10. (Currently amended) The stent of Claim 1, further comprising ~~additionally including an organic film layer formed on the surface of the stent and covalently bonded to the carbon deposit; and~~ a polymeric layer comprising a therapeutic substance formed on the ~~organic film~~ plasma-polymerized polymer film layer~~, wherein the polymeric layer contains a therapeutic substance~~.

11. – 12. (Canceled)

13. (Currently amended) The ~~medical device of Claim 12~~ stent of claim 1, ~~wherein the implantable body is a~~ comprising a radially expandable tubular body.

14. – 16. (Canceled)

17. (Withdrawn) A method of modifying a surface of a stent, comprising implanting on a molecular level carbon at a depth within the surface of the stent.

18. (Withdrawn) The method of Claim 17, wherein the stent is made from stainless steel.

19. (Withdrawn) The method of Claim 17, wherein the surface is the tissue-contacting surface of the stent.

20. (Withdrawn) The method of Claim 17, additionally comprising depositing a polymeric film layer on the surface of the stent.

21. (Withdrawn) The method of Claim 17, additionally comprising exposing the stent to an acrylic acid plasma to form a plasma polymerized film layer on the surface of the stent.

22. (Withdrawn) The method of Claim 17, additionally comprising forming a plasma polymerized film layer on the surface of the stent, wherein the polymer layer is covalently bonded to the carbon.

23. (Withdrawn) The method of Claim 17, additionally comprising depositing a plasma polymerized film layer on the surface of the stent, and forming a polymeric coating containing a therapeutic substance on the plasma polymerized film layer.

24. (Withdrawn) The method of Claim 17, wherein the act of implanting carbon comprises:

positioning a stent on a holding device in a reaction chamber, the stent being surrounded by a carbon-based grid;

introducing argon in the chamber and initiating a plasma to sputter carbon from the grid and into the surface of the stent, wherein the process is performed under the following parameters:

Process	Parameter Range
Argon	> 99.9% by volume
argon flow rate (sccm)	10 to 500
pressure in the chamber (mTorr)	0.1 to 500
RF power (watts) to create the plasma	10 to 1000
RF frequency (MHz)	2 to 2800
bias voltage applied to the stent (KV)	-5 to -30
pulse width (microseconds)	5 to 20

Frequency (stent)	DC – 2 KHz
bias voltage applied to the grid (V)	-300 to -5000

25. (Withdrawn) The method of Claim 24, additionally comprising: introducing acrylic acid into the chamber and initiating a plasma to form a plasma-polymerized film layer on the surface of the stent, wherein the process is performed under the following parameters:

Process	Parameter Range
acrylic acid flow rate (ml/min)	0.05 to 0.35
pressure (mTorr)	70 to 250
RF power (W)	50 to 250
RF frequency (MHz)	2 to 2800
power/flow rate (MJ/Kg)	9 to 35

26. (Withdrawn) The method of Claim 25, additionally comprising introducing carbon dioxide into the chamber to limit the rate of de-carboxylation of the acrylic acid.

27. (Withdrawn) The method of Claim 17, wherein the act of implanting carbon comprises:

positioning a stent on a holding device in a reaction chamber;

introducing a carbon-based gas into the chamber and initiating a plasma for depositing carbon ions into the surface of the stent, wherein the process parameters are performed under the following conditions:

Process	Parameter Range
gas flow rate (sccm)	10 to 200
pressure (mTorr)	0.1 to 2
RF power (watts)	10 to 1000
RF frequency MHz	2 to 2800
bias voltage applied to the stent (KV)	-10 to -80
frequency (stent)	DC to 2 KHz
pulse width (microseconds)	5 to 100

28. (Withdrawn) The method of Claim 27, wherein the carbon-based gas is methane.

29. (Withdrawn) The method of Claim 27, additionally comprising: introducing acrylic acid into the chamber and initiating a plasma to form a plasma-polymerized film layer on the surface of the stent, wherein the process is performed under the following parameters:

Process	Parameter Range
acrylic acid flow rate (ml/min)	0.05 to 0.35
pressure (mTorr)	70 to 250
RF power (W)	50 to 250
RF frequency (MHz)	2 to 2800
power/flow rate (MJ/Kg)	9 to 35

30. (Withdrawn) The method of Claim 29, additionally comprising introducing carbon dioxide into the chamber to limit the rate of de-carboxylation of the acrylic acid.

31. (Currently amended) The stent of Claim 1, wherein the metallic stent body ~~metallic substance~~ comprises an alloy.